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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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1. VEB Wissenschaftlich-Technisches Buero fuer Kraftmotorenbau, until 1 January 1954 WTB (NTB)-4 of SAG Transmasch, is at Berlin-Adlershof, Rudower Chaussee 24-28. The establishment is under the jurisdiction of the East German Ministry for Machine Construction, but all research tasks are allotted to it direct by the USSR Academy of Sciences in Moscow. The staff regard the conversion to a VEB as merely a political move, which has had an adverse effect on production and morale.
2. The Buero is equipped to carry out basic research on diesel and internal combustion engines and the development of gas turbines for special purposes. Because of the lavish expenditure during the time when the factory was part of SAG Transmasch, there is no shortage of tools, machine tools or testing instruments. All auxiliary equipment required for carrying out trials (such as test desks, test benches and oscillographs) is designed and produced in the factory, the only exceptions being brake gear, testing instruments of types in everyday use, auxiliary motors and generators, blower installations and standard components with DIN (Deutsche Industrie-Norm) specifications.
3. The Buero's past, current and future assignments date from 1953, when a research plan, with completion dates up to 1956, was drawn up. The various tasks are sent from the Moscow Academy of Sciences in Russian and numbered, and they are translated in the factory, and the original numbers are retained. No satisfactory explanation of the numbering system has been worked out by the German staff; the engineers in the factory are of the opinion that it is a purely arbitrary method of identification, perhaps also intended to confuse the curious. The original texts are stored in the registry until the tasks are completed and then are returned to Moscow with all plans and working drawings. There are strict instructions that no copies, carbon copies or rough notes remain in the factory. Only the engineers in charge of jobs ever receive the original texts, for which they have limited access to the safe.

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4. The current research tasks include:

8/3T. Collation of information about the optimum air-intake temperature and the increase of power dependent upon it; the calculation and recording of heat losses; the accurate determination of the contents of average air-intakes.

8/4T. Research on combustion chambers to determine the most efficient ignition point in relation to the rotation of the crankshaft; investigation of the residue resulting from wear on cylinder walls; determination, with the aid of optical measuring methods, of the most efficient shape for the flame on firing; experiments with varying quantities of fuel injected and fired in a controlled combustion chamber, to give data on temperature and pressure and a diagrammatic record of results; investigation of the mechanical stresses to which the individual components of engines are subject, in particular, the connecting rods, crankshafts, camshafts, clutch and rear main bearings.

FM/4-6. Investigation of the operation of various types of injector pumps in relation to the power developed by the engine, including the optical and photographic determination and the recording of the processes in the combustion chamber; determination of the ignition temperature with various quantities of fuel in the chamber and the recording of the shape of the flame; research into the vibration of individual engine components.

34/36. The development of a universal single-cylinder test block with control desk, for testing diesel engines of up to 1200 BHP; the development of a similar machine for testing internal combustion engines.

37/38. Research into the influence of climatic conditions with special reference to very low temperatures, on the power developed by internal combustion and diesel engines; influence of altitude on the power developed, with special reference to the variations necessary in the volume of air intake and measurement of fuel consumption.

5. (a) The development of several gas turbine installations with the smallest possible overall dimensions, in particular in the range 2000 to 6000 BHP (brake horsepower).
- (b) The development of a 650 BHP horizontal-opposed engine for use in motor cars (this engine was completed and then the task was cancelled by the Moscow Academy. The East German Main Administration for Vehicle Construction was proposing to take it over when financial details were settled.)

1. Comment. We are a little doubtful whether these tasks really come directly from Moscow.

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